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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,554	05/02/2002	Dan L. Eaton	P3230R1C001-168	9987

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EXAMINER

KOLKER, DANIEL E

ART UNIT	PAPER NUMBER
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1646

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/063,554	EATON ET AL.	
	Examiner	Art Unit	
	Daniel Kolker	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10 September 2002</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The amendment filed 9 September 2002 has been entered. Claims 1 – 6 are under examination in the instant office action.

#### ***Priority***

The preliminary amendment filed 9 September 2002 indicates that this application is a continuation of application 10/006867, which is a continuation of PCT/US00/23328, which is a continuation-in-part of application 09/390137. The instant disclosure receives priority to 24 August 2000, the earliest application in which the specification was identical. Priority is not granted to earlier applications because the disclosure is not enabling.

It is noted that applicants may argue that the results of the assay beginning on page 140 (paragraph 529) of the specification, the Tumor versus Normal Differential Tissue Expression Distribution assay, establish utility and enablement for the claimed invention, resulting in an earlier priority date. That assay is found to be lacking utility and therefore is not found to be enabling as required by 35 U.S.C. § 112, first paragraph for reasons described below in the rejections under 35 U.S.C. §§ 101 and 112, below.

#### ***Information Disclosure Statement***

The information disclosure statement filed 10 September 2002 has been considered. The BLAST results demonstrate that applicants are aware of nucleic acids with identity or homology to the one claimed herein. However, as the BLAST results do not give sufficient identifying information, the examiner cannot determine if said sequences constitute prior art.

U.S. Patent 5,546,637 is cited on the information disclosure statement as being issued to Jacobs et al. on 16 July 1997. However this patent was issued to Niedecker on 20 August 1996. The patent has been considered but it is not immediately obvious how the subject matter contained therein is related to the instant application. Note that the '637 patent is to a device to close sausages.

#### ***Specification***

The disclosure is objected to because of the following informalities:

The title is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The specification includes browser-executable hyperlinks. This objection could be overcome by deleting all occurrences of the text "http://".

Appropriate correction is required.

***Claim Rejections - 35 USC §§ 101 and 112***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 – 6 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility. The claims are drawn to antibodies that bind to PRO994, as well as monoclonal, humanized, and labeled antibodies and fragments of antibodies.

The specification discloses, on pp. 140 – 144, the results of an assay in which certain cDNA molecules showed differential expression in tumor tissue versus control tissue. The results indicate that DNA58855-1422, which encodes PRO994 (see specification p. 15, paragraph 73) is more highly expressed in normal stomach than in stomach tumor, and is more highly expressed in rectum tumor than in normal rectum. The specification (p. 140, paragraph 530) asserts that a nucleic acid molecule differentially expressed in normal as compared to tumor cells of the same tissue is useful as a diagnostic to determine the presence or absence of a tumor. The specification also asserts that nucleic acids differentially expressed in tumors are useful as therapeutic targets for the treatment of tumors. The asserted utility in diagnosis and treatment is not substantial for the following reasons. First, it is unclear whether the changes in expression of the PRO994-encoding cDNA is statistically significant, and whether such changes in the expression of the cDNA are correlated with changes in expression of the encoded protein. The changes in PRO994 expression, even if they are statistically significant, are at the level of nucleic acid, which is not necessarily correlated with protein expression or activity. The claims of the instant application are drawn to antibodies, which recognize polypeptides and do not recognize nucleic acids. Therefore the issue of whether or not the changes detected in gene

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expression reported in the specification are in fact related to diseases does not influence the utility of the antibody. Absent a showing of a nexus between changes in PRO994 polypeptide levels and a specific disease, the antibody is useless. Second, cDNA libraries have an inherent bias to them, therefore the results obtained in a cDNA library-based differential expression assay may not be representative of actual changes in the tissues from which the libraries are created. Ohara et al. (2001, Nucleic Acids Research 29(4):e22 p. 1 – 8, see especially Introduction) teach that cDNA libraries under-represent larger cDNAs and those that contain internal restriction sites. Further, the specification does not disclose the biological significance of the changes in expression. Finally, the specification does not disclose whether the increase in PRO994 expression in rectal tumor, or the decrease of PRO994 expression in stomach tumor, is a cause of the tumors or a consequence of them. Since PRO994 expression increases in one tumor and decreases in another, its expression level cannot be considered as a marker for the presence or absence of a tumor. Therefore, there is no basis for the asserted use of the PRO994 protein or nucleic acid as a therapeutic target for treatment of the disease condition. Clearly, further research and experimentation are required to find out whether the PRO994 is useful as asserted.

A substantial utility, *by definition*, is a utility that defines “real world” use, and a utility that requires or constitutes carrying out further research to identify or reasonably confirm a “real world” context of use is not a substantial utility. In the instant case, the alterations in expression of PRO994 in stomach and rectum tumors (if significant), at the most, is an interesting invitation for further research, experimentation and confirmation as to whether the PRO994 polypeptide is useful as a diagnosis marker, or suitable as a therapeutic target for treatment of the tumors. These further research and experimentation, however, is part of the act of invention, and until it has been undertaken, the claimed invention is not considered substantial.

Claims 1- 6 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1 – 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states that the claimed antibody “binds” the protein of SEQ ID NO:48, whereas dependent claim 6 states that the antibody “specifically binds”. The term “specifically” in claim 6 is a relative term that renders the claim indefinite. The term “specifically” is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Further the use of the term in the dependent claim raises the issue that the antibodies of the other claims may not be specific to the protein, in which case the metes and bounds of the claims are in question.

Claim 4 is further indefinite as an antibody cannot be a fragment of itself.

The remaining claims are rejected for depending from an indefinite claim.

#### **Conclusion**


No claim is allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Kolker whose telephone number is (571) 272-3181. The examiner can normally be reached on Mon - Fri 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Caputa can be reached on (571) 272-0829. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel E. Kolker, Ph.D.

February 23, 2005

  
SHARON TURNER, PH.D.  
PRIMARY EXAMINER  
2-24-05